REVIEW REPORT
ON

THE MIDCENTRAL AND WHANGANUI DISTRICT HEALTH BOARDS' REGIONAL WOMEN'S HEALTH SERVICE MATERNITY SERVICES

18 February 2016

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1. Executive summary

1.1 Introduction

In October 2015, an external review was requested by the DHB CEOs following concern that there had been seven reported serious adverse events in the Regional Women's Health Services (RWHS) over the previous nine months; six at Palmerston North Hospital and one at Whanganui Hospital. The events had led to two intrauterine deaths, three neonatal deaths and three neonates with significant morbidity.

The main aim of the review was to establish whether RWHS was equipped to provide safe and effective maternity care. Together MDHB and WDHB wanted to ensure that women can access woman and family-centred maternity care at both Palmerston North Hospital and Whanganui Hospital which meets all established standards for service delivery

The review was carried out by Emma Farmer, Head of Division - Midwifery, Waitemata DHB, Dr Chris Hendry, Midwifery and Maternity Service Development Advisor and Dr Ian Page, Clinical Head, Obstetrics & Gynaecology, Northland DHB.

1.2 Review process

Following receipt of the terms of reference, the review team requested a set of background documents to provide service context, then undertook a three day site visit and met with 68 staff and consumers in Palmerston North and 35 staff on the Whanganui Hospital site. In total 15 written submissions were given directly to the review team, representing the views of 34 staff and two interface departments within the hospital. Information gathered from face to face interviews, documents and written submissions was used to develop this report.

1.3 Review findings

The external review team identified a number of factors that were affecting the effectiveness of service delivery including:

<u>Regional Womens Health Service</u>

- Management of a complex work environment with two large nationally mandated programmes and one regional programme being rolled out simultaneously over both DHBs, creating competition for staff time and resources.

<u>Midcentral DHB</u>

- Differing philosophical perspectives between clinical leaders has resulted in relationship difficulties at a leadership level.
- There is a lack of clarity over clinical and management responsibilities and accountanbilities.
- There is a lack of timeliness in reviewing adverse events, owing mainly to the lack of co-ordination of activities required to implement and complete them.
- Communication difficulties relating to the implementation of the National Maternity Clinical Information System(MCIS) before the product was sufficiently developed and the DHBs were fully committed to resourcing this change mangement process.
- There is a lack of clarity over resource requirements (staffing and space) owing to unclear management and leadership accountability.

- There is generally poor team work which is associated with high levels of stress, and leadership that is overcommitted.
- The clinical setting is disorganised and the outpatient clinics are poorly planned and managed.
- An increase in client complexity compounded by the increased likelihood that LMC midwives transfer care of women to hospital staff, which in turn increases their workload unpredictibly, adding to concerns about sufficient staffing, both medical and midwifery.

Whanganui DHB

- If this DHB cannot recruit and maintain adequate obstetric cover they will need to rely on locums. This creates clinical risk because the temporary staff are not familiar with the unit, policies and staff.

The reviewers did not explore each of the adverse event cases separately as most of the reviews had not been completed. However the information available indicated that problems were more likely to occur when women were admitted after hours to the service, had pre-existing medical conditions, had CTG recordings that were misinterpreted or not used, and had a delay in medical assessment. Whanganui DHB had commissioned a Critical Systems Analysis (CSA) into the adverse event in its unit as well as independent obstetric and midwifery reviews into the care of this mother and baby.

1.4 Review recommendations

Regional Womens Health Service

- In light of the failure of the RWHS to develop into a fully integrated service, it is recommended that the project be reviewed and a less complex process developed to enable reliable obstetric cover for Whanganui DHB to be maintained.
- Mitigate risk associated with the MCIS roll out until the system and processes are identified as clinically appropriate.

Midcentral DHB

- The organisational and governance structure needs to be reviewed to provide more clarity over the responsibilities and accountabilities of the clinical leaders and management.
- Consider greater integration of the quality activities within the maternity service with the DHB quality team including training of staff and LMCs in the standardised quality processes, such as the RCA process.
- The working environment within the Maternity Service needs to improve as a matter of priority. Both the physical surroundings and the way the LMC and facility maternity staff work within it need to be addressed.
- Given the increased complexity in maternity care, the midwifery and obstetric staffing needs to be reviewed to ensure that appropriate cover and skill mix is provided 24/7.
- Conduct a (DHB Midwife Leaders and NZCOM) Transfer of Care Audit to obtain a more accurate picture of how often and why transfer of care occurs. The results should be benchmarked with other DHBs and shared with LMCs and core midwives to inform discussion on continuity of midwifery care strategies.

- The clinical training programmes need to be multidisciplinary and attended by all clinicians.
- The service should consider more active engagement with consumers in service development and feedback.
- All RCA reports should be completed as soon as possible and the key themes that emerge out of these need to inform future service development activities.

Whanganui DHB and Midcentral DHB

- Whanganui DHB and MidCentral DHB develop a memorandum of understanding or similar arrangement that lays out clearly for staff and the community steps to take in the event of suspension of services due to staff shortages.

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Acknowledgements

The review team would like to recognise the high level of engagement in this process by the DHBs, their staff, LMCs and consumer representatives. The time and effort by these key stakeholders to accommodate this review at short notice, many travelling some distances and others postponing work to attend site meetings, was much appreciated.

The DHBs were very responsive to requests for further information, documents and alterations/additions to the programme right up to the day of visits.

Glossary of Terms

BFHI	Baby Friendly Hospital Initiative
CD	Clinical Director
CEO	Chief Executive Officer
COW	Computer on Wheels
CSA	Clinical Systems Analysis
CTG	Cardiotocograph
DHB	District Health Board
DOM	Director of Midwifery
EAP	Employee Assistance Programme
FTE	Full time Equivalent
LMC	Lead Maternity Carer
MCIS	Maternity Clinical Information System
MQSP	Maternity Quality and Safety Programme
MDHB	Midcentral DHB
NZCOM	New Zealand College of Midwives
RCA	Root Cause Analysis
RMO	Registered Medical Officer
RWHS	Regional Women's Health Service
SAC	Severity Assessment Code
SMO	Senior Medical Officer (Consultant Obstetrician)
TOR	Terms of Reference
WDHB	Whanganui DHB

3. Introduction

The Regional Women's Health Service was established in 2013 as a planned amalgamation of Whanganui and MidCentral District Health Boards' Women's Health Services. These services include both gynaecology and maternity.

In November 2015 an external review was requested by the DHB CEOs following concern that there had been seven reported serious adverse events in the Regional Women's Health Service (RWHS) over the previous nine months; six at Palmerston North Hospital and one at Whanganui Hospital. The events had led to two intrauterine deaths, three neonatal deaths and three neonates with significant morbidity.

The review was to establish whether the RWHS was equipped to provide safe and effective maternity care. Together MDHB and WDHB want to ensure that women can access woman and family-centred maternity care at both Palmerston North Hospital and Whanganui Hospital which meets all established standards for service delivery.

The review was also to identify opportunities for improvement and engender ownership of the short, medium and long term actions needed to ensure a safe and effective service. Given their importance, leadership, clinical governance, interdisciplinary relationships, models of care and the culture of the service were reviewed by site.

The outcomes of this service review are planned to feed into the proposed RWHS evaluation.

3.1 Review sponsors

Chief Executive Officers, Kathryn Cook, MDHB and Julie Patterson, WDHB

3.2 Review Group

External:

Dr Chris Hendry, Midwifery and Maternity Service Development Advisor
Dr Ian Page, Clinical Head, Obstetrics & Gynaecology, Northland DHB
Emma Farmer, Head of Division - Midwifery, Waitemata DHB

Internal

Dr Bart Baker, Clinical Director and Haematologist, MidCentral DHB. (The internal reviewer facilitated the engagement of key participants.)

3.3 Review Terms of Reference

The external clinically-led review team was tasked with establishing an understanding of the functioning of the RWHS maternity service. This included engagement with clinical and support staff, service leadership, lead maternity carers, and staff from other services who had a clinical and operational interface with maternity services. The review was also to reference progress with the implementation of the Maternity Quality and Safety Programme.

The following were to be considered within the review process:

- the current state of clinical governance, including clinical leadership, policy, systems and processes by site designed to ensure patient safety and service improvement
- the services' application of documented policies/ procedures/ structures/ established processes in place to support the delivery of maternity services, informed by the circumstances of the seven cases leading to adverse events including:
  - the national maternity access agreement
  - audit, quality and serious event management processes
  - the application of Serious Assessment Code (SAC) rating for maternity events

    - systems to support early recognition and escalation of serious events
    - quality of documentation/information and access, including the Maternity Clinical Information System
    - early evaluation of potential high risk women and referral to appropriate level of care
- timely access to appropriate back-up and resources, including clinical information and staffing.
- communication within and between the two maternity services, DHB staff, access agreement holders and consumers.
- relationships between hospital staff and relationships with lead maternity carers, and the effectiveness of that interface given the shared practice environment.
- the culture of the service overall by site.
- an assessment of the capacity and capability within the service to undertake the necessary service development to address any findings of this review.

The reviewers were to determine appropriate recommendations based on the outcome of their review, covering service-wide recommendations for service improvement and corrective actions where appropriate. This should also include recommendations regarding the configuration and leadership of the RWHS where this is considered necessary (RWHS Maternity Services Review Terms of Reference, 03 October 2015).

4. Review process

The review team received the final Terms of Reference (Appendix 1) on 3rd October 2015, and subsequently requested a series of background documents that would inform the review (Appendix 2). With regard to the seven adverse events that precipitated the review, the team requested specific 'case profiles' (refer to Appendix 3) for each to better inform the circumstances of the events, given that only three of the RCA reports had been completed by the time of the review. These profiles only enabled the team to focus generally on the application of documented policies/ procedures/ structures/ established processes in place to support the delivery of maternity services as a whole.

Each reviewer read the material and then the team worked together to agree key themes that had surfaced from the documentation. A three day site visit was planned (Appendix 4).

On Monday 9th November 2015, the team held meetings on site with key participants in Palmerston North, and then met with Whanganui DHB key participants on site in Whanganui on Tuesday10th November. The final day (Wednesday 11th November) was held at Palmerston North Hospital with meetings and a summing up with the two CEOs. On each hospital site the team undertook a tour of the service facilities and met with staff.

Over the site visits, the review team met with 68 staff and consumers in Palmerston North and 35 staff on the Whanganui Hospital site. In total 15 written submissions were given directly to the review team, representing the views of 34 staff and two interface hospital departments The review team took notes during the meetings, which, together with the submissions and reviewed documents, informed this report.

There was active engagement with the review process which was appreciated by the reviewers. Many staff were prepared with documents and notes for the reviewers and some also sent submissions following the meeting. Staff identified issues with the current service, and appeared to have a genuine desire to make changes in order to provide a higher quality service.

5. Background

The events that led to the review of the RWHS Maternity services included six events that occurred at Palmerston North Hospital and one event that occurred at Whanganui DHB.

6. The maternity service context

The RWHS Maternity Service consists of two separate DHB maternity services, one funded and managed by Whanganui District Health Board and the other by its neighbour MidCentral District Health Board. The two DHBs have a collective fund to establish and maintain the overarching RWHS, with a stated aim to have "one service two sites".

6.1 MidCentral DHB Maternity Services

There are three birthing facilities in the MDHB catchment. Palmerston North Hospital is the location for the majority of births (84.6%). There are two primary maternity facilities which accounted for 7.5% of all births in 2014; one in Dannevirke (managed by the local PHO) and another in Levin (managed by the DHB). Home births are also provided by LMC midwives and accounted for 5% of births in 2014.

According to the MDHB's Annual Maternity Report 2014 (MDHB, 2015) the majority of pregnant women (92.4%) register with a Lead Maternity Carer (LMC); 85% with a midwife and 7% with a doctor. Almost a third (33.6%) of pregnant women identify as Maori. Over half of the pregnant women (52.6%) reside in the most deprived quintiles.

In 2014 there were 1,776 births in Palmerston North Hospital, 200 less than two years ago. Over half of these (59.5%) were spontaneous vaginal births and 30% were by caesarean section.

There are 56 midwife LMCs with an Access Agreement to the service. Staffing the service there are:

- 5 SMOs (4.8 FTE consultant obstetricians) including both the Clinical Director and the Clinical Leader
- 7 Registrars
- 7 House officers
- Director of Midwifery (0.3 FTE/1.5 days/week)
- Service Manager (0.5 FTE/2.5 days/week)
- Charge midwife (1 FTE)
- Senior midwives, including Associate Charges and Educators (4.4 FTE)
- 43 Midwives (3 FTE short)
- 1 Enrolled Nurse and 5 registered Nurses
- Health Care assistants 6.5 FTE
- Lactation Consultants 1.8 FTE
- Administration 7.2 FTE

At Palmerston North Hospital, the service is spread over three floors with:

- 8 antenatal clinic rooms on the ground floor that also double up for gynaecology
- 8 birthing beds and a 3-bed antenatal assessment unit on the first floor
- A 26 bed antenatal/postnatal ward on the second floor
- One obstetric theatre among the general theatres in the main theatre block on the second floor; two minutes' swift walk from the "delivery suite".

6.2 Whanganui DHB Maternity Services

There are three birthing facilities in the Whanganui DHB catchment. Two primary maternity facilities which together accounted for 7% of the births in 2014. One facility is in Taihape which is managed by the local PHO, and the other in Waimarino is a birthing centre (no inpatient postnatal stay), managed by the DHB. Whanganui Hospital is the locality for the majority of births (87.8%). Home births are also provided by LMC midwives and account for 5.2% of the births in 2014.

According to the WDHB Annual Maternity Report 2014 (MDHB, 2015) the majority of women (99%) register with a Lead Maternity Carer (LMC midwife). A high percentage of pregnant women identify as Maori. More than three quarters (76%) of the pregnant women lived in the most deprived quintiles.

In 2014 there were 680 births in Whanganui Hospital and 874 in the DHB region. Of these births, 80.7% were vaginal births and 15.4% were caesarean sections.

There are 15 midwife LMCs with an Access Agreement to the service.

Staffing the service are:

- 4 (3.4 FTE) SMOs (consultant obstetricians) including the Clinical Director
- 1 Registrar
- 1 House officer
- 1 Director of Midwifery (0.3 FTE/1.5 days/week),
- 1 charge midwife (1 FTE)
- 1 senior midwife (0.6 FTE/3 days/week)
- Midwives 19 FTE
- Administration 1.4 FTE
- Lactation Consultants 1 FTE
- Health Care assistants 2.1 FTE

At Whanganui Hospital, the service is mainly provided within the one location consisting of:

- 3 birthing beds and 11 flexi antenatal/ postnatal beds within one "ward".
- Caesarean sections are carried out in the general theatre in close proximity on the same floor.
- The antenatal clinics take place in the general outpatients department.

7. Review Findings Framework

The London Protocol Systems Analysis of Clinical Incidents framework is used to provide feedback to the sponsors on the review findings.

The London Protocol https://www1.imperial.ac.uk/resources/C85B6574-7E28-4BE6-BE61-E94C3F6243CE/londonprotocol_e.pdf (accessed 2015).
The London Protocol provides a framework for the investigation and analysis of critical incidents and is based on the organisational causation model first developed by James Reason (in Taylor-Adams & Vincent, accessed 2015).

This model postulates that fallible decisions at the higher organisational level are transmitted down through departmental pathways to the workplace, creating task and environmental conditions that can promote unsafe acts. To mitigate risk, defences and barriers are designed to protect against human and equipment failure, such as policies, protocols, training, checking etc.

This model identifies seven factor types, each with their contributory factors. These factor types are; Institutional context, organisational and management, work environment, team, individual staff, task and technology and patient factors.

Based on the reviewers' reading of the adverse event case profiles, documents provided for the review, observations during the site visit, interviews with key informant groups and analysis of the written submissions to the reviewers, the seven factors will be used as headings to summarise the observations made during this review.

7.1 Contextual factors

Economic and regulatory context
Links with external agencies/organisations
National obligations/requirements

New Zealand Model of Maternity Care

The model for the provision of maternity care in New Zealand is based on the premise that continuity of care by a known health care provider improves the experience and health outcomes for mothers and babies.

The model is designed to enable woman and their families to choose and get to know their Lead Maternity Carer (Midwife or Doctor) during pregnancy and this same practitioner, or their nominated back up, will provide care during labour and birth and then care for the mother and baby for up to six weeks after the birth. For women who have complications during pregnancy and birth their care is planned by DHB secondary services and then delivered in collaboration with the Lead Maternity Carer.

This model is both unique in New Zealand and unique to New Zealand. However it has a strong evidential base and current international benchmarking suggests that it provides an effective and safe model for the provision of maternity care (PMMRC 2015).

A framework of national documents describes how services are to be delivered and how the practitioners and DHBs will operate together. This framework provides safeguards and ensures that practitioners collaborate effectively.

Table 1. New Zealand Maternity Model framework

Document	Purpose
Primary Maternity Services Notice, pursuant to section 88 of the New Zealand public health and disability act 2000 http://www.health.govt.nz/publication/section-88-primary-maternity-services-notice-2007	Describes the services to be provided by a Lead Maternity Carer, and other health professionals claiming under the notice.
Maternity Facility Access Agreement https://www.health.govt.nz/system/files/documents/pages/maternity-facility-access-agreement-final-may07.pdf	Describes requirements for self-employed practitioners to practice in a DHB Maternity Facility
DHB Funded **Maternity Service Specifications. Tier one and two** http://nsfl.health.govt.nz/service-specifications/current-service-specifications/maternity-service-specifications	Describes the services, provisions and funding mechanism for DHB provided Maternity services
Guidelines for Consultation with Obstetric and Related Medical Services (**Referral Guidelines**). https://www.health.govt.nz/system/files/documents/publications/referral-glines-jan12.pdf	Guides Lead Maternity Carers on indications and process for consultation with Medical services
Health Practitioners Competence Assurance Act 2003 http://www.health.govt.nz/our-work/regulation-health-and-disability-system/health-practitioners-competence-assurance-act	Provides a framework for the regulation of health practitioners in order to protect the public where there is a risk of harm from professional practice.

Maternity services in New Zealand are regulated and funded through two separate sources. The District Health Boards are funded to provide maternity facility services, specialist maternity services, neonatal services and antenatal education, whilst primary maternity (Lead Maternity Carer) services are funded directly by the Ministry of Health to community-based self-employed midwives. These midwives, who are not employees of the DHB, access maternity facilities to birth their clients (the women). The legislative and regulatory frameworks for LMC midwives to work on site in the hospitals and access support from the facility staff and specialist services are described in the legislation and documents referenced in table 1 above. These guide DHBs' relationships with the LMC midwives.

While this service delivery model has been in place for more than 20 years, some managers and hospital-employed clinicians have found it difficult to reconcile with the model and continue to feel that they need to have more supervision of the activities of LMC midwives, particularly while they are providing their services in maternity hospitals.

The observation made during the review was that some members of the maternity clinical team in MidCentral DHB continued to struggle with the place of LMC midwives within the maternity facility, particularly if the woman had not been referred to specialist services.

The continued attempts to articulate and support this model of care by midwifery leadership in the face of the philosophical disagreement with the model by the clinical director, had heightened stress levels between them.

It was also reported by midwifery leadership that some LMC midwives did not always abide by the spirit of the model and handed women over or referred women too soon to specialist services in an effort to manage large caseloads, or at their convenience. When the facility was busy, short staffed or during after hours, handover was said to be more of a problem, because the DHB-employed midwives were required to provide the midwifery care.

It was noted that of the seven adverse event cases, four were admitted on a Monday and six were admitted out of hours.

Whanganui DHB appeared to have adapted well to the model of care and to such an extent that all women using their service have their midwifery care provided by the LMC midwife regardless of whether clinical responsibility had been transferred to a specialist. However, a risk lay in facility staff not knowing the potential need for assistance required by the LMC when a woman was high risk, particularly during the birth.

Access agreements

The national guidelines for management of access agreements for LMCs to the hospital service appeared to have been followed. The cancellation of an access agreement was viewed by one clinical leader as a legitimate response to concern over clinical practice, while many others felt that the DHB had adequate means of managing such events. There was general agreement that the processes needed to be followed in an equitable and timely manner.

Maternity service specialist consultation and referral guidelines

There appeared to be disagreement between clinicians over when and how LMCs should consult and refer to specialist services. This seemed to depend on the confidence and courage of the LMCs. The more experienced LMCs preferred to go directly to the SMO, while others reported that they were required to go through the Charge Midwife, then the House Officer, then the Registrar who made the decision whether to call the SMO. This could become a time-consuming process, particularly if the Registrars and House Officers were new or junior. It also became a problem during after hours, particularly if the Registrar or SMO was in theatre.

Issues

<u>Midcentral DHB</u>

- The autonomy of the LMC midwife to choose who to consult with (and when) was not always clear to core staff.
- At times there was confusion and misunderstanding of the referral guidelines.
- There appeared to be difficulty in accepting this maternity service model by the MDHB Clinical Director, which precipitated differences in opinion on how clinical responsibility should be managed. The Midwifery leaders were trying to support this national model in the absence of support from the Clinical Director.
- There were varying views on how the service's clinical practice was being impacted by these issues:
    - Core midwives reported that the model of care advocated in the facility was becoming too medicalised within the challenging environment of the MOH seeking lower caesarean section rates (MQSP, 2015/16).

- Senior medical staff felt that some of the adverse outcomes could have been avoided if referrals had occurred in a more timely manner. They also felt they were often held accountable by HDC for poor outcomes which might have been prevented by earlier referral.
- LMC midwives were reported to be handing women over more often at their convenience rather than because of clinical need as identified in the MOH 'Referral Guidelines'.
- LMC midwives reported difficulty in handing women over because of claimed staffing resource issues and strained relationships within the facility.

- The observation was made that the philosophical differences between the clinical leaders were likely to influence the view of the service presented to others within the organisation as a whole.
- The confusing accountabilities for leadership and management within the MDHB service were the likely cause of these issues not being addressed and the persistence of polarised views on clinical accountability.

Whanganui DHB

- This maternity service had adapted well to the New Zealand model of maternity care, providing an integrated service for women.

Regional Womens Health Service

- The differences observed between the two DHB Maternity Service delivery models would make it difficult to create 'one service'.

The Regional Women's Health Service

This inter-DHB service was set up in response to uncertainty of obstetric service provision in Whanganui Hospital two years previously. There is reported to be sufficient obstetric cover in Whanganui currently, but it remains tenuous.

There was overwhelming feedback from participants from both MDHB and WDHB that there has been little to show for the investment in the development of this service. Those from Whanganui were said to be actively disengaged from regional committees, and, because the clinical leads are all MDHB-based employees, Whanganui staff view the service as an attempt to 'take over' their service which they state is quite different from that provided in MDHB. Conversely the MDHB participants felt that they were putting huge amounts of time and energy into the project that was not appreciated by Whanganui DHB participants. This gave the impression that the RWHS project has the potential to have a detrimental impact on relationships between the two services.

The whole project appeared to have become very-complex. A significant number of RWHS committees and groups had been established that seemed to replicate current committees and groups within each DHB, effectively doubling and, in some cases, tripling the number of committees and groups that the clinical leaders and managers are required to attend. It was noted by the reviewers that over time attendance at the RWHS committees and groups had waned, particularly by midwifery and medical staff from both sites. Feedback indicated that the project approach was 'very bureaucratic' and led to a feeling of 'drowning in paperwork'.

It was claimed, predominantly by MDHB staff, that the distraction of this service development activity caused a high level of frustration in their home base where they were viewed as not being visible to manage issues that needed urgent attention, such as staffing and facilitating

the Root Cause Analysis process and follow up recommendations. There was no evidence presented to indicate a planned approach to resourcing the projects as a whole in relation to the tasks and activities required. However, an evaluation of the service had been planned in early 2016 to provide a fuller picture of its effectiveness.

Communication about the RWHS did not appear to be well managed. Many interviewed did not have a shared understanding of the rationale for the service and the shape it was expected to take. There were few advocates for the model among those interviewed, with one clinical leader describing it as a sham. Despite that, it did not appear that anyone seriously questioned its continuation.

Issues:

Regional Womens Health Service

- The establishment of the RWHS has not been the success anticipated.
- The establishment of the service has increased the complexity of service development and accountability, particularly at the Midcentral site.
- Whanganui's current stable obstetric cover did not provide the impetus required for them to embrace the initiative.
- Given the differences observed between the two DHB Maternity Services' size, service delivery models, workforce and demographics, it would seem that creating 'one service' may not be feasible within the current environment.
- However, Whanganui DHB did continue to carry the risk of uncertain obstetric cover in the future, with few plans to address this.

The roll-out of the National Maternity Clinical Information System (MCIS)

Both MDHB and WDHB Maternity services were in the process of rolling out the electronic Maternity Clinical Information Service (MCIS). They were among the first five DHBs to roll out the new electronic maternity record in July 2015. This project, led by the RWHS Clinical Director, had placed unexpected pressure on the service with unforeseen resource and communication implications.

Issues:

Midcentral DHB

- The project was viewed more as a technical implementation project rather than a service process change, hence there has not been good support for clinical staff to engage with the system. This has resulted in some keeping both paper and electronic records.
- Most internal interface services and LMCs could not access the system, therefore they had to go to the maternity unit to access results of consultations or referral on their clients.
- Staff using the system experienced problems working out where to enter information and had not been able to easily extract meaningful information when trying to print out information for those who are not using the system.
- Positioning of the computers in the birthing rooms required the clinician to turn their back on the woman to use the system; COWs (computers on wheels) are now available.
- The three way consultation between the LMC, Obstetrician and woman (which is a key element of the referral guidelines) was increasingly difficult to implement when communication is becoming more "virtual".
- Some noted that handovers have also become more virtual; again reducing the amount of time clinicians communicate directly with each other.

- The additional time needed to complete accurate records added up to 30 minutes' midwifery time per shift.

Overall feedback is that the programme has potential, but needs significant further development and more on-site support for clinicians to work out how to change work processes safely. The overall feeling is that staff have invested too much time learning how to use the system to cease using it.

The Whanganui DHB service appears to have been more wary of the system and continued with some paper/note taking.

Recommendations relating to the Institutional Context issues:

Regional Womens Health Service

- In light of the failure of the RWHS to develop into a fully integrated service, it is recommended that the project be reviewed and a less complex process developed to enable reliable obstetric cover for Whanganui DHB to be maintained.
- The resources required for these nationally-mandated activities need to be adequately assessed and provided. Obtain broader DHB support for the activities to achieve economies of scale and better integration with other similar activities within the DHBs.
- Mitigate risk associated with the MCIS roll out until the system and processes are identified as clinically appropriate.

Midcentral DHB

- Accountability and responsibility for developing and maintaining relationships between clinicians within these maternity services need to be clarified.
- MDHB needs to provide clear leadership and an expectation that the Clinical Leaders will work to support the New Zealand Model of Maternity Care.
- The role of the LMCs within the service need to be supported within a collegial environment reflective of the philosophy underpinning the New Zealand Maternity Service model of care

7.2 Organisational and management factors

Financial resources and constraints
Organisational structure
Policy standards and goals
Safety culture and priorities

The organisational structure

Over the previous 18 months, there had been some change in the structure of the organisation of MidCentral DHB, with the previous CEO retiring in October 2014 and a new CEO appointed in July 2015.

Since 2008, the previous CEO had also taken on the role of General Manager of MidCentral Health, which included the maternity service, and was reported to have a more 'hands off' approach to managing the service; particularly with regard to the relationships between the clinical leaders. The previous Director of Nursing, who resigned in July 2015, had also deferred management and governance issues related to maternity to the service's clinical

leadership and management within the service, in line with the organisational structure of the time.

At the time of the review, there had been a separate General Manager (GM) for MidCentral Health, appointed in July 2015, who had been acting in the role since October 2014. The Operations Director - Specialist Community and Regional Services, who reported directly to the GM, was accountable for oversight and management of the maternity service within Women's Health.

There had been a change of Director of Nursing (DON) at MDHB in 2015, but this role had no accountability for the maternity service, only professional support for nurses working in the service. The DON had concerns about the isolation of the Director of Midwifery (DOM) role and was in the process of establishing a professional relationship for support.

The Midwifery Advisor for the DHB (employed by MDHB Planning and Funding) also provided professional support for the DOM and had responsibility for relationships and communication with the LMC midwives, being one herself as she only worked part time for the DHB. She had also been appointed to the Midwifery Advisor role for Whanganui DHB and this role carried over to the Midwifery Advisor RWHS, which she was also heavily involved in establishing.

The MidCentral organisational chart provided to the review team and the position descriptions were used in an attempt to make sense of the reporting and accountability structures within the organisation. The initial page of the organisational charts seemed to indicate that the Clinical Director for Women's Health reported directly to the Operations Director and the Director of Midwifery reported to the GM directly, but in the detailed version further on, it stated that the relationship of the two to the Operations Director was a 'partnership' not a direct report. Only the Service Manager for Women's and Children's Health was identified as the direct report.

Those interviewed as part of the review seemed to give different interpretations of who was accountable to whom and for what within the service and for maternity within MidCentral Health as a whole. In addition the roles within the Regional Women's Health Service or how this service integrated with either of the DHB organisational charts were not evident, except on a separate RWHS chart. Issues that the reviewers were seeking accountability for were:

- Midwifery staffing resource (MDHB and RWHS)
- Medical staffing resources (MDHB and RWHS)
- Medical and Midwifery leadership (MDHB and RWHS)
- Midwifery and Medical Management, (MDHB and RWHS)
- Maternity quality and safety (MDHB and RWHS)
- Communication and relationship management between staff and with LMCs (MDHB)
- Communication and relationship management between the two DHBs' women's health services in relationship to the development of the RWHS.

With regard to reporting lines for the midwifery and medical leadership within MidCentral Health, this was not clear to the reviewers. It was viewed by the Operations Director (who was also accountable for the RWHS) that he worked in partnership with the midwifery and medical clinical directors, but they did not report directly to him. In the position descriptions, the Director of Midwifery was identified as reporting to the GM MidCentral Health and the Clinical Director to the GMs of both DHBs.

The RWHS and MDHB charge midwives and midwife educators reported 'professionally' to the RWHS Director of Midwifery. The charge midwife from MDHB reported directly to the Women's Health Service Manager, who also provided some services for the RWHS.

The view given by the Director of Midwifery was she had two jobs; one for the RWHS and the other for MDHB. The Clinical Director conveyed that he had one job, Clinical Director of the RWHS which included MDHB, however, he was not clinically active in the MDHB service and was said to work mainly off site.

There was a new Charge Midwife recruited 12 weeks prior to the review, who reported to the Women's Health Service Manager. This role was filled after the resignation of the previous Charge Midwife who had chosen to return to a core midwifery role.

The organisational structure in Whanganui, mainly because of its smaller size, had more streamlined and clearer lines of responsibility and accountability. Also the Charge Midwife had been in the service for a few years, following a time of uncertainty in the service. The medical and midwifery staff clearly had confidence in her 'management' of the service.

Issues

Regional Womens health Service and Midcentral DHB

- While the RWHS (also the MDHB) Clinical Director had the Obstetric Head of Department (HOD) as a direct report, the absence of the Clinical Director from the clinical setting placed additional pressure on the HOD role.

Midcentral DHB

- The MDHB management structure had undergone a succession of changes as the executive team changed over the previous 18 months. On top of that, the establishment of the RWHS further obfuscated the lines of accountability, particularly within the MDHB maternity service.
- There was a lack of clarity over who took responsibility for what in the MDHB maternity service. The situation presented to the reviewers seemed to be that the Midwifery Advisor was responsible for communication with LMCs. The Director of Midwifery was not accountable for clinical activities and management of the service which was the responsibility of the Charge Midwife who reported to the Service Manager.
- It was observed that management of relationship issues were not addressed owing to the varying views among the leaders and managers as to whose responsibility this was.
- The lack of clarity over accountability within the service was also felt to reflect on the responsiveness of the service to resource needs, such as additional medical and midwifery staffing, and accommodation of both staff and equipment within the MDHB maternity facility.
- With the Operations Director being responsible for "supporting the delivery of contemporary multidisciplinary models of care" (Operations Director's Position Description p.1), it is difficult to understand how this could be achieved if he did not have any jurisdiction over the clinical leaders.

Governance and leadership

Possibly as a result of confusion over accountability, there seemed to be problems with the medical leadership team in terms of cohesive behaviours. It was reported that each had

different practice requirements, to which the seven registrars and house officers had found it difficult to keep trying to adapt.

Staff commented on a dissonance between the medical and midwifery leadership. It remained unclear to the reviewers as to who was responsible for managing this situation and what action was taken (and by whom) as a result. However, this situation appeared to have a continuing impact on the relationship between the parties and may have impacted on expediting the RCA review processes.

It was observed that relationships within the MDHB medical team risked effective communication between staff, including between registrars and SMOs. Identification and highlighting of these issues as a result of the review process will likely lead to improvements in interdisciplinary communication as well.

Concerns were also raised about the level of support for those working in the maternity service in Horowhenua Hospital. This DHB service is located within the community hospital in Levin but managed as part of the women's health service. There appeared to be relationship issues between some midwives. It was also pointed out that there had been little attention paid to the issues at Horowhenua because of the distractions at the Palmerston North Hospital service.

The picture presented of these problems by staff and others to the reviewers was not evident in the minutes of meetings, which generally presented a picture of slow progress with activities and moving decision-making to the following meeting. Attendance recorded at RWHS meetings demonstrated a reduction in attendance over time, with only the RWHS clinical leads regular attenders as they mainly chaired meetings.

With regard to the WDHB maternity service, the RWHS configuration had positioned the MDHB Director of Midwifery as the clinical midwifery leader within WDHB. This effectively led to a reduction in strategic midwifery leadership for the region as it was represented nationally by only one leader instead of the expected two.

Issues:

Regional Womens Health Service and Midcentral DHB

- Overall the leadership group within the maternity service at MDHB and at RWHS level appeared to lack cohesion, and feedback from staff showed that decision making at this level was problematic due to a lack of consensus. This created on-going delays in decision-making at both a local and regional level.
- Low attendance at RWHS meetings may indicate the level of interest staff generally had in the process.
- Overall it was observed that the MDHB maternity service had become siloed within the hospital services as a whole and the RWHS had become very siloed from both MDHB and WDHB operational activities.

Policies standards and goals

A review of both annual reports indicated a significant number of groups and committees involved in monitoring and setting policy and standards, such as the Governance Group, Leadership Group, Document Management Committee, Maternity Audit and Case Review Committee. They seemed to operate both at RWHS level and again in similar forms in each DHB. It also appeared that many of the same people were on each of the groups.

There also seems to be a heavy emphasis in both annual reports on the role and functions of the DHB facilities and their staff, with little focus on the LMCs who form a significant component of the maternity workforce.

Review of attendance at these groups and committees showed little representation by LMC midwives, and to confuse matters, the RWHS Midwifery Advisor and MDHB/WDHB Midwifery Advisor (part time) is also an LMC midwife and as a result she was viewed by many within the DHBs as also representing LMCs when she was attending the groups/committees. However, she made it clear to the review team that this was not necessarily the case.

Issues:

Midcentral DHB

- The Midwifery Advisor was viewed as also representing the LMC perspective on DHB Groups and Committees which was viewed by some LMC midwives as inappropriate. This may have inadvertently resulted in missed opportunities for LMCs to participate in clinical governance activities.
- Communication with LMC midwives is a vital component of keeping them updated with DHB policies and standards, but this was not always well managed.

Quality and safety

The notion of the MDHB maternity service working in a silo was echoed by feedback from those responsible for managing the RCA process. It seemed that relationship issues within the maternity service and differing philosophical perspectives on clinical roles and responsibilities, had delayed agreement on the RCA terms of reference, agreement on who would be the clinical experts and availability of staff and others for interviews.

The team reviewed the RCA process after talking to the Quality team and reading through the three available adverse event reports. Overall the reviewers believe the reports tended to take too narrow a view and commonly did not seek to look beyond LMC care to the wider context of care. The London Protocol framework, used to frame this report, calls for a broader view on adverse events.

It was reported that no MDHB maternity staff or LMCs had been trained in the Taproot process (which is a requirement of those investigating RCAs) because none had been 'shoulder-tapped' to do so. Hence the investigators were less likely to have good knowledge of the broader contextual maternity service issues, particularly the relationship between LMCs and the DHB service.

Overall the Quality team was said to struggle with case reviews and providing timely reports. They had raised their concerns with the Operations Director. Below is a timetable of events and RCA completion timeframes.

Table 2. Timing of RWHS Adverse Events

Adverse event	DHB	Date of event	Notification to HQ&S	Reports completed
One	MDHB	10th Dec 2014	22nd Dec 2014	5th May 2015 (RCA)
Two	MDHB	18th Mar 2015	25th Mar 2015	29th Jun 2015 (RCA)
Three	MDHB	25th Mar 2015	9th Jul 2015	23rd Oct 2015 (RCA)
Four	MDHB	12th Apr 2015	14th Apr 2015	Not completed (RCA)
Five	WDHB	4th May 2015	8th May 2015	Not completed (CSA)
Six	MDHB	21st Jul 2015	20th Aug 2015	Not completed (RCA)
Seven	MDHB	11 Aug 2015	12th Aug 2015	Not completed (RCA)

In October 2012, the 'Riskman', an e-risk assessment and management programme was rolled out in MDHB. It had been operating in WDHB for the previous ten years. This programme aims to raise awareness of adverse events and critical incidents. A number of participants from the MDHB maternity service indicated their frustration with 'Riskman' and questioned its usability.

Two years ago the Maternity service introduced a 'Maternity Outcomes Tracking System' requiring staff to complete a one page form for each woman who had been in the service so that any adverse outcomes during the stay, could be identified prior to discharge. Feedback indicated that these forms were not always completed at MDHB. In the 2014 year, on average of 74% were completed, compared with 100% completion at Whanganui DHB. By July 2015, the completion rate by MDHB was down to 46%.

Generally there was reported to be slow follow up of adverse outcomes in MDHB service, with staff claiming to feel disconnected from the reviews and not made aware of the outcomes. Timing of debriefing sessions was also seen to be problematic.

Issues:

<u>Midcentral DHB</u>

- The quality team reported difficulty engaging the maternity service in the adverse event review process. The main reason given was that clinical experts had difficulty taking time out to be involved in the process, which delayed the process.
- Achieving agreement on recommendations coming out of the RCAs also proved to be time consuming and delayed completion of reports as well as the development of the action plans. Fundamentally, a long-term culture of not being able to easily reach a consensus position between the leaders delayed and frustrated the processes.
- Neither the Operations Director nor the Clinical Director articulated any significant concerns regarding the safety of the service. They viewed the recent adverse events as a 'random cluster' and that there were no clear inherent issues within the service that precipitated them. There is no evidence from meeting minutes or reports received that there were any safety concerns in the service. However, a business case for more SMO staff was in development and policy relating to obtaining a second opinion on each cardiotocograph (CTG) recording had been introduced. The RCA process for three cases had produced three sets of recommendations that had been converted into corrective actions.

Recommendations relating to the organisational and management factors:

Midcentral DHB

- The MDHB organisational structure needs to be reviewed to provide more clarity over the responsibilities and accountabilities of the clinical leaders and management.
- Consider greater integration of the quality activities within the MDHB maternity service with the DHB quality team, including training of staff and LMCs in the standardised quality processes, such as the RCA process and related quality assurance activities. This may require additional resources.
- Clarify the lines of accountability and responsibility for quality and outcomes at both service and organisational level.
- Actively include all maternity staff including LMCs in maternity service quality assurance and policy development activities.

7.3 Work environment factors

Staffing and workload
Design of the facility and physical resources
Availability of equipment and resources
Administrative and managerial support

Service culture

Related to the aforementioned issues, the MDHB Maternity Service was described by some as at a low point. However, most respondents had ideas for service improvement and the hope that the service would recover. Most suggestions centred on the need for a new leadership culture. There was support for the suggestion that the medical leadership positions be tenured for 2-3 years and rotated. This was viewed as potentially broadening the experience of more staff and also exposing them to the realities of leadership and management. The Charge Midwife was reported to be providing much needed 'fresh eyes' on the service.

MDHB interface services reported that concerns about the service were not addressed by 'management'. The diabetes team made multiple attempts to highlight risks, such as entering them into Riskman, sending letters, e-mails and met with senior leaders. The impression was that the risk was not well assessed and mitigated by the service. The Anaesthetics Department held a similar view.

Issues

Midcentral DHB

- The service culture was viewed as being negative and in need of urgent attention.
- Risks identified by external services need to be acknowledged and addressed.

Management support

There was a lack of clarity over who managed what in the MDHB maternity service, particularly staffing and resources. The new Charge Midwife appeared to be forming a good working relationship with the Service Manager to obtain a better understanding of staffing

needs and resources. They had also recently recruited associate charge midwives to the out-of-hours shifts to manage staffing, which seemed the biggest issue. There did not seem to be any planning associated with predicted workload based on bookings.

Within the current environment, it was difficult to see how the MDHB Director of Midwifery could have on-going influence on the service because she reported directly to the GM and worked in 'partnership' with the Operations Director and other clinical leaders.

Her role was to provide professional oversight including development of policies and guidelines. However, when enacted these invariably impacted on staffing and resources. One example is the policy of the 'fresh eyes' approach to interpretation of CTGs which was implemented following the RCA reports. The result has been that midwives spend additional time trying to find medical staff willing to sign off the CTG without seeing the woman themselves. This illustrates the risk-averse environment generated out of the series of adverse events

The Service Manager also had responsibility for Women's and Children's Health, as well as supporting the RWHS establishment.

The Whanganui service reported being well supported by management.

Issues:

Midcentral DHB

- The management/ clinical leadership relationships and accountabilities may have hindered timely responsiveness of clinical governance to risk management activities.
- Some policy development seems to have been rushed in response to adverse events, without the unintended consequences being anticipated. Also communication to all clinicians (LMCs and registrars particularly), of policy changes had not been consistent or easily accessible.

Staffing and workload

The MDHB service was reported to be stretched and resources spread thinly, resulting in challenges to maintain the core functions of the service - clinical safety and an appropriate clinical environment. This view was supported by both internal and interface service clinicians and consumers.

There was general concern by interface providers that the MDHB maternity service was under pressure. The time required to embed MCIS, the distraction of the Clinical and Midwifery Directors with the establishment of the RWHS and a perceived medical and midwifery staffing shortage were viewed as impacting on the ability of staff to maintain a smooth running and safe service. Each interface clinical group that met the reviewers pointed out various indications of the service not being staffed to meet the needs of the day.

It seemed that other clinical teams had increased their SMO staffing over time, but the Maternity SMO numbers had remained the same for many years. This issue was also raised by the Clinical Director, who was not able to state progress made with the SMO staffing business case because it had been passed onto the Operations Manager.

Overall staffing levels, both obstetric and midwifery, were reported by clinician informants to be insufficient in the MDHB maternity service to deliver a consistent level of care 24/7. However, it was the view of their midwifery leader that Trendcare acuity tool reported overall

good staffing coverage. Therefore it may be that the variance periods were more obvious to the staff in the unit.

It may be that the midwifery staffing levels are right overall, but not distributed appropriately to meet the need at the time and on the day. This is about response to variance. However, there was frustration reported by staff that LMC midwives were inconsistent about when they would hand over women and expect core midwives to take over care. This made rostering difficult and staff had to be called on duty from days off, which in turn had led to increased sick leave. It was not clear whether the impact the risk averse environment developing in the MDHB service over time in response to events, had precipitated earlier hand over of women.

MDHB interfacing services such as Anaesthetics, Endocrinology, Paediatrics and Theatres identified concerns about the ability of the maternity service to provide a consistent the level of service 24/7. Their experience was that concerns were either not recognised or not acted on. Concerns raised in writing in May 2015 by the Department of Anaesthesia to the Clinical Director of Obstetrics in relation to "serious concerns regarding the coverage of obstetric emergencies" had yet to receive a response.

There was concern expressed that the MDHB SMO roster was difficult to fill and sometimes the on call SMO had difficulty responding to registrars because the SMO was in theatre. The SMO roster on the whole was said to be a problem, with the Obstetric HOD needing to fill the gaps. This situation could lead to an expectation that he could be relied on to do this and lessen the willingness of others to take their turn 'on call'. This situation was exacerbated by poor skill mix of staff on duty at the same time. Many of the registrars were early in their careers.

A potential shortage of obstetric cover was discussed and acknowledged by Whanganui DHB. They were reliant on locum cover on a regular basis. The practice of LMC midwives in the Whanganui service providing all of the midwifery care for women meant that midwifery staffing of the facility was less of an issue. Some of the LMC midwives also worked part time on the core, so had experience working for the DHB.

Issues:

Midcentral DHB

- MDHB staff did not believe that staffing issues were being acknowledged or addressed by leadership and management.
- The confused reporting lines and accountability are likely to have impacted on responsiveness to perceived workforce shortages.
- Both staff and LMCs noted a lack of visibility of clinical leaders in the clinical area, not to undertake clinical care necessarily, but to be aware of their working reality, which may account for the differences in opinions over staffing levels.
- Maternity services are a challenge to staff, because of the unpredictable nature of birthing, particularly so for women who have co-existing medical conditions such as diabetes who require more intensive staffing, particularly in labour.

The work environment and associated resources

The MDHB Maternity Service first floor areas (including the delivery suite rooms, staff offices and antenatal assessment room) were very cluttered and seemed disorganised, making it difficult to ascertain whether there was enough room or not.

It also needs to be noted that this service is provided over three floors which makes it more difficult to have staff 'float' easily between the antenatal clinic, delivery suite and the antenatal/postnatal ward. There seemed to be insufficient room to 'house' all of the staff, and cupboards had been converted into offices. A newer handover room to accommodate all of the computer monitors had recently been made available.

The antenatal clinic space was severely compromised by dual gynaecology and obstetric clinics being held that involved both registrars and house officers, supervised by SMOs. There was simply not enough room. This required the secondary care/diabetes midwives to go up to the delivery suite floor to undertake CTGs on women, hence they were not able to attend multidisciplinary team meetings. The functioning of the clinic was poor and lacked clear senior leadership, and models of care were inefficient and not women-centred.

The model of care for outpatient services created cramped and unsatisfactory conditions for women who were expected to wait long periods of time to be seen (up to four hours for women with diabetes in pregnancy). The outpatient service appeared to be poorly planned. There was block booking of women who then had to wait for hours each week in late pregnancy, to be seen by the various clinician groups. The diabetes in pregnancy outpatient service was a particular example of this.

Staff reported that anecdotally some women did not attend the clinic or left before being seen because of the length of time they waited and the cramped waiting room. The number of registrars and house officers needing to see women as part of their training was not well accommodated in the clinic area.

The unquestioning continuation of custom and practice activities in the MDHB service was demonstrated by the "Hip check" clinic that was run three mornings a week in the delivery suite. Each Monday, Wednesday and Friday morning at 0800, the orthopaedic staff undertake a two-minute assessment of newborns for 'clicky hips'. If the baby was not in hospital or unavailable at the time, the mother has to bring the baby in at that hour of the morning for the assessment. If there are women in delivery suite for inductions, this clinic adds to the confusion on the floor. It was not clear why the clinics are still taking place in a hospital setting by a specialist service. In many DHBs this is considered primary care issue and occurs predominantly in the community by either LMCs or GPs.

It was reported that the MDHB women's health service is not part of the new hospital configuration project. The current MDHB Maternity Service accommodation seems inadequate for the number of staff they have and the level of monitoring they need to undertake. Accommodating the seven registrars and seven house officers was proving a challenge.

The Whanganui service, being smaller and purpose-built recently, operates on one floor within one 'ward'. This makes staffing and resourcing more efficient for them.

Issues:

Midcentral DHB

- The MDHB maternity service accommodation was not well planned and did not seem to flow well and it was unclear as to who was responsible for managing this.

Recommendations relating to the work environment factors:

Midcentral DHB

- Alter the SMO requirements of the service to ensure appropriate Obstetric cover 24/7 and support for registrars in training.
- Alter the midwifery staffing model to include the presence of an Associate Clinical Charge Midwife on every shift. This is an important cornerstone of clinical safety and should be undertaken as a matter of urgency.
- Undertake a (DHB Midwife Leaders and NZCOM) Transfer of Care Audit to obtain a more accurate picture of how often and why transfer of care occurs. The results will be benchmarked with other DHBs and shared with LMCs and core midwives to inform discussion on continuity of midwifery care strategies.
- The role of the DOM should be reviewed to ensure that they have responsibility and accountability for safe staffing and sufficient latitude and influence to manage the unit safely
- Explore ways that the service can respond more efficiently and effectively to workload variance, by implementing an on-call system or similar.

7.4 Team factors

Written and verbal communication Supervision and support Team structure

Poor relationships between individuals and groups of staff within the service were reported to potentially interfere with the safe delivery of care, and despite efforts to address staff culture, these remained. This has also been reported to have influenced the service's ability to attract new staff.

Communication

Communication with MDHB maternity service interface providers was said to have been disrupted by the introduction of MCIS. This was mainly because those outside the service, but providing care for women in the service, did not have access to MCIS where most of the information on women is kept.

The implementation of the MCIS in MDHB being a larger service over three floors,, required considerable changes in communication between clinicians and it seemed that some were unprepared or unable to cope with the change. Also some processes had not been clearly worked through, for example, the booking form, completed by the LMC midwives on each of their women was generally sent to the hospital well in advance of the birth date. This information was then entered into the MCIS by an administrator, but they are not permitted to enter any clinical details (which are usually provided in the booking form by the LMC) in the electronic record. This meant that previous clinical history was not available in MCIS for women referred or admitted to the service until the LMC turned up with her hard copy records. It was custom and practice that the booking form was part of the hard copy set of notes that were stored in the delivery suite for when the woman was admitted. These were particularly useful if the woman was admitted ahead of the LMC arriving.

Prior to MCIS, LMCs were sent a letter informing them of the outcome of their referral of a woman to the secondary service. After the MCIS was introduced, all notes from a consultation visit were entered into the computer. Subsequently, LMC midwives could only access the woman's electronic records if they physically came into the hospital and logged onto the hospital IT system. Also when they were in the facility with women, many LMC midwives did not use the electronic record contemporaneously because they kept hard copy clinical notes for their own records. Therefore, the MCIS was not always up to date for specialist services if they were asked to see a woman.

Within the MDHB maternity service, interface services, such as emergency, operating theatre and the diabetes service, did not have access to the MCIS which meant in the absence of hard copy notes, they had to develop their own notes, which meant women had two sets of notes and the maternity service did not see what had been documented for the woman by other services. One of the adverse event cases was also a diabetic and was admitted to the MDHB emergency department. Women under the Diabetes Centre had notes held in the Centre that operated during business hours only.

It was also noted that collegial verbal handover between shifts had reduced significantly, because most just read the electronic notes. This is likely to have reduced the interaction between clinicians that fosters discussion on concerns each may have about specific clients. Some reported that some clinicians did not even read the electronic notes before rounds or antenatal clinic assessments and spent a lengthy time asking the patient directly about their condition and wellbeing.

The Whanganui DHB service did not appear to have these problems; likely because of their service delivery model, management structure and size.

Issues:

Midcentral DHB

- Overall there were a number of communication issues within the MDHB service and between the service and other clinicians and services.
- Not all the information on the woman was visible in one place once she had a referral to, or was admitted into, the service.
- The LMCs did not have external access to the MCIS, so they had to come into the hospital and use one of the computers there to find out the results of a referral to specialist services.
- In hindsight, it was observed by MBHB that the roll out of the MCIS was not as resourced as it needed to be considering it required significant change management. It seemed to have been viewed more as a technical innovation. Also it was not consistently used by the medical staff and LMC midwives.

Supervision and support

With the number of registrars and house officers in the service, MDHB has a responsibility to provide supervision and support for these doctors. It was noted that there was a lack of consultant interest in teaching and providing support at formal teaching. Most of the consultants did not attend the weekly CTG meetings which ultimately led to the mainly junior registrars advising other junior staff on CTG interpretation. This was said to lead to confusion over verbal descriptions of CTG findings to SMOs over the phone.

CTG interpretation was a feature in a number of the MDHB adverse events. The service offers the RANZCOG Fetal Surveillance course, which is well attended by LMCs and core midwives, but not by SMOs.

Issues:

Midcentral DHB

- It was observed that the SMOs were not as actively engaged in activities that registrars viewed as supportive.
- The role of SMOs in on-going education and training did not seem to be clear.

Team work

Overall it appeared that many of the senior clinicians in MDHB worked independently of each other and there was little mention of working as part of a multidisciplinary team. It was observed and also reported that the consultants were not working well as a team. They had issues with the management style of the HOD. There were problems with the roster, particularly finding SMOs to cover on-call, which resulted many times in the HOD doing additional call by default, which in turn led to increased stress and exhaustion. The micromanagement style was claimed to be the result of others not wanting to be involved. The differing practice styles (hands on and hands off) were also identified as confusing the registrars.

The continuity of care model of care was reported to have changed over time at MidCentral DHB, with many Lead Maternity Carers (LMCs) handing over care to core midwives for induction of labour, labour augmentation and epidural analgesia, citing an unwillingness to manage "secondary care". However for some it appeared that this unwillingness was not extended to other "secondary" conditions, such as twin pregnancy and breech presentation. Although this is a trend in other centres it is particularly evident in this DHB and is likely to add significantly to the core staff workload. This is managed in other DHBs by providing good support and communication with LMCs.

In contrast, the Whanganui service appeared to be working well as a team, with the medical leader and midwifery leaders providing strong, clear direction to their team, including LMCs.

Issues:

Midcentral DHB

- A fracturing of teamwork was observed and reported on within the MidCentral Maternity Service.
- The ability to successfully gain support from higher management was difficult to determine.

Recommendations relating to the team factors:

Both DHBs.

- The MCIS development process needs to be inclusive of all clinicians and services that interface with the Maternity Service. This includes the quality team.

Midcentral DHB

- Once the leadership and management accountabilities are established, team building activities need to be developed that include LMCs and interface clinicians.
- At the beginning of each SHO quarter all members of each team have the roles of the SHO and the registrar explained.
- Identify and support attendance at mandatory clinical training/learning sessions for all clinicians.

7.5 Individual staff factors

Knowledge, skills and confidence Competence Physical and mental wellbeing

Knowledge skills and confidence

At MDHB maternity service there appeared to be a number of experienced staff, both midwives and obstetricians, with a good skill mix among core midwives, and an adequate number of LMC midwives. However, midwifery (including LMCs) and medical staff participants believed that there were insufficient senior midwives on duty (poor skill mix), particularly on morning shift in the delivery suite. While the birth numbers at MDHB have reduced, the actual care complexity, caesarean section rate (at 40% at the time of the review), and the increase in transfer of care from LMCs, required more core staff. The service was also having difficulty attracting midwives and was increasingly having to rely on nurses to work in the postnatal ward.

The new Charge Midwife at MDHB had been recruited within the previous three months and, as noted previously, was viewed positively by staff as 'fresh eyes' on the service. They had noticed positive changes being made (and planned) which gave them confidence that there would be service improvement.

Documentation provided from both DHBs and discussion with staff indicated that there was a good orientation and education programme for employed midwives. The medical staff also appeared to have a good orientation process documented.

There seemed a perception among DHB employed staff at MDHB that LMC midwives had varying degrees of knowledge and skills, particularly around CTG interpretation. This was particularly evident within the incident and RCA reports. However, it seemed that all of the midwives involved in the adverse events had undertaken training in CTG interpretation, but not all of the medical staff had.

There were a number of opportunities for staff to attend training sessions on a range of clinical issues. Having LMCs, core midwives and medical staff at the same training sessions would likely engender better teamwork and consistency when managing emergencies.

Core midwives in the Whanganui DHB service did feel that because the LMC midwives worked with the women in the facility, they could lose some skills and were in the process of working out how they could maintain their skill levels by providing more hands on care from time to time.

Issues

Midcentral DHB

- There were varying views on the level of skills, knowledge and competence of various clinician types within the MDHB service. More shared learning opportunities would likely improve this perception.

Physical and mental wellbeing

It was observed that some senior staff in the MDHB service were under high levels of stress and having difficulty coping. Some were open about this and others less forthcoming. It was also generally commented on that more core midwives were feeling the pressure of being asked to do additional shifts at short notice, often to cover staff sickness.

Symptoms of this difficulty in coping with the stress were observed and reported to include further siloing, lack of communication with colleagues, avoidance (not turning up to important meetings, not making decisions and failing to respond to urgent queries), believing others were not 'pulling their weight', and lack of delegation (lack of trust in others).

Issues

Midcentral DHB

- The health and wellbeing of some staff needs to be addressed urgently.
- Appropriate behaviour needs to be modelled by clinical leaders and managers.

Willingness to embrace change/ideas given to reviewers

Feedback from staff indicated that those working in the MDHB service were ready for change, but it needed to happen at the top first. They felt that clinical leaders needed to be 'inclusive and woman-centred' in line with the concepts of the NZ Model of Maternity Care. Such a change was viewed as necessary if the Department was to grow, retain existing staff and encourage innovation.

A flatter clinical governance structure at MDHB was suggested, so that any clinician could feel they could go to the Clinical Leader with anything. A flatter structure was also viewed as enabling more meaningful workstreams to clinicians generally (spreading the load).

It was recommended to include clinicians in any change processes and to move to a more team-based environment. It was felt that managers needed to be much more actively involved in the service, attending meetings and entering into 'meaningful dialogue' with clinicians as a 'team building' activity. The MQSP activities were viewed as critical and needed to be expanded (ownership increased).

There were several suggestions from those in both DHBs about how to manage the MCIS, which all viewed as an ultimately essential tool for practice:

- Cease using it or increase the amount of paper work permitted
- Engage LMCs more in the process
- Work through the ways of working with e-records, so that the verbal communication continues and the woman (not the screen) becomes the centre of attention when she is in the room/clinic/bed
- lock the notes once they have been completed, so changes cannot be made retrospectively
- increase the ease of access to the actual e-notes, with not so many log-ins through the IT system
- ensure equipment is available to enable the three way communication (LMC, Woman and specialist) that is required under the national referral guidelines.

Issues:

Midcentral DHB

- Staff clearly have a desire for change and no shortage of ideas. They just need the environment to enable constructive change to occur.

Capability of managing change

It appeared that the relationship between the key clinical leaders in the MDHB service needed to be attended to. Without this, improvements to the service will be difficult to initiate and be sustained. Within this environment, it appeared that the Operations Manager did not feel he was in a position to make decisions enabling completion of the RCAs.

Feedback on the ability of the service to manage change included the impression that they were just 'fighting fires' with a lack of time to reflect and plan, 'never actively sought to be the best at what it does' and had viewed management issues as resulting in 'a glacial speed of change'. The maternity staff were observed by an interface service to be 'stressed, overwhelmed and unsupported'.

Issues:

Midcentral DHB

- It is felt that the current working environment, level of stress, relationship issues and confusing lines of accountability need to be addressed before the level of change required in the MDHB service could be embarked on successfully.

Recommendations relating to the individual staff factors:

Midcentral DHB

- Clarify the roles and responsibilities of the clinical leaders, then support them to develop a more collegial environment among clinicians, including LMCs.
- Ensure standards are met around communication, interdisciplinary training, and service planning.

7.6 Task and technology factors

Task design and clarity of structure
Availability and use of protocols
Availability and use of test results
Decision making aids

Availability of information: policies, test results, etc.

Feedback from MDHB staff and LMCs indicated that the policy development process was overwhelming at times, particularly following recent adverse outcomes. It was claimed that the service had in excess of 300 policies, resulting in difficulty locating the appropriate one when required.

LMCs complained of an almost continuous flow of emails of draft then final versions of policies. They reported that they did not have anywhere they could externally view the updated collection of DHB policies. They had to come into the facility to view them.

Most midwives did not have direct access to MDHB's IT system off site, therefore there was a delay in them receiving timely feedback on referrals or notification following discharge. The three RCA reports completed at the time of the review recommend 11 policy and guideline changes. With a further four reports to come, it is likely many more are recommended.

A review of policies and guidelines relating to the service with a view to streamlining the process and volume needs to be considered. This issue is compounded by the simultaneous development of RWHS policies and guidelines.

Issues:

Midcentral DHB and RWHS

- Lack of adherence to a good policy management process particularly in relation to LMCs.
- Lack of off-site access for LMC midwives to the Hospital IT system means they do not have access to timely information from the service.

Cardiotocographs (CTGs)

This diagnostic tool is heavily relied upon as a means of monitoring and diagnosing fetal wellbeing. A number of the MDHB adverse events involved interpretation of CTGs to identify if and when consultation and referral to a SMO should occur.

There does seem to be variance in views on the extent to which GTGs should be used. There is also evidence that in hindsight CTGs are more likely to be viewed as indicating fetal distress, if the interpreting clinician knows that there was an adverse outcome for the baby (Dixon, 2012). Basically it is easier making a diagnosis with hindsight.

Issues:

Midcentral DHB

- The interpretation of CTGs is contentious. It appears that medical staff have been poor attenders at CTG training opportunities, yet all of the LMCs involved in the adverse events were current with their training. It has been pointed out previously that attending training as a multidisciplinary team builds up knowledge and confidence in each other.

Recommendations relating to task and technology factors:

Midcentral DHB and the RWHS

- The main means of managing the adverse events seemed to be the generation of more policies and guidelines. Once the clinical leadership responsibilities are clarified, a genuine multidisciplinary process, including LMCs, interface providers and consumers needs to be established to review all of the policies and guidelines for the service.

7.7 Patient factors

Condition/complexity
Language/communication
Social and cultural factors

Consumer expectations

In the MDHB service it was noted that consumers expected to meet with the consultant when they came to clinic. They did not expect to wait for long periods in the antenatal clinic, particularly if they were employed or had children with them. However, the clinic management and structure booked women in groups and because it was a teaching hospital, they were seen by two to three clinicians per visit. It was reported that as some medical staff did not read the e-notes prior to the consultation, women had to repeat themselves to each clinician.

In WDHB it was reported that the LMC midwives generally visited with the woman when she consulted with a specialist.

Issues:

Midcentral DHB

- It was observed and reported that the MDHB service was not consumer centric even though the whole thrust of the New Zealand Maternity Service changes in the 1990s was to become more woman and whanau-centred.

Client complexity

Compared with the national averages, MidCentral was reported to have high rates of deprivation, smoking, young childbearing age, with a higher proportion of Maori women of childbearing age. There has been an increase in women with diabetes in pregnancy. It appeared to be custom and practice for these women to have care handed over to the specialist service rather than remain with the LMC. However, the diabetes centre and diabetes midwives only work five days a week. This meant that these women were reliant on calling the delivery suite if they had any queries or problems after hours rather than a specific key clinician/lead carer. Most were on insulin. Ultimately diabetic women did not receive 24/7 continuity of maternity care.

Also because of workload issues, the Obstetrician who ran the Diabetes Obstetric clinic could no longer attend the Diabetes Multidisciplinary team meetings with the medical team.

Whanganui were identified as having an complex birthing population, but having the LMCs provide continuity of care to women meant that the care wasless reliance on the secondary service to co-ordinate care when women required obstetric input.

Issues:

Midcentral DHB

- There was increasing complexity among childbearing women accessing the MDHB service, yet there did not seem to be an adaptation to custom and practice to accommodate this.
- 'Women with complex medical conditions require a multidisciplinary approach to care, often across more than one DHB. Each woman requiring such care should be assigned a key clinician to facilitate her care'[1]. This was not evident for MDHB women.

Consumer participation

Feedback from the MDHB Māori representative was that the service did not engage Māori consumers and that Māori representation was "token". It was felt that the service had a strong medical model and this failed to acknowledge the social context of care which is important to the engagement of Māori in care. The clinical leaders in the service had been involved in developing the Tuia Framework with a view to providing a greater emphasis on the needs of Maori receiving care, which is to be commended.

The review team met with two MDHB consumer representatives who were active on a number of maternity committees. They had a long history with the service and were able to

[1] https://www.hqsc.govt.nz/assets/PMMRC/Publications/Ninth-PMMRC-report-FINAL-Jun-2015.pdf

articulate system shortcoming and potential solutions. They also presented as enthusiastic and valuable potential contributors to the development of a more consumer centric service.

Issues:

Midcentral DHB

- Maori seemed poorly represented, yet they formed a significant group of service users.
- Consumers need to be valued contributors to service development

Recommendations relating to patient factors:

Midcentral DHB

- This service should consider more actively engaging Maori and consumers in service development and feedback. With a growing level of patient complexity, the service needs to ensure that it meets the growing service need.

8. Additional comments relating to the adverse events

Of the seven adverse events within the RWHS, only three had completed the RCA process, even though the last event had occurred three months prior to the review. Whanganui DHB had already commissioned a Critical Systems Analysis (CSA) into the adverse event in its unit. Alongside the CSA, independent obstetric and midwifery reviews have been undertaken into the care of this mother and baby.

The team had been asked to review each of the cases as part of this overall review. Following the site visit and feedback from those taking part, it was felt that undertaking a review of each case as well would alter the findings of this overall service review. The RCA reports that were available focused heavily on identifying the part that individuals had to play in the events, without considering the contextual factors that have been laid out in this report.

The main themes coming out of the reports and associated documentation relating to the events that had yet to be reported on included:

- timely consultation and referral to specialist services
- interpretation of CTGs by both LMCs and doctors, and
- difficulty in contacting SMOs
- diabetes featured in three cases and two women had an induction of labour.

Six of the women were admitted after hours and the seventh at 0800 which is generally shift hand over and a busy time in the unit. Three of the cases were initially under an LMC and the other four under specialist care. All of these issues have been identified in other parts of this report as needing to be addressed.

Issues:

- Only three of the seven adverse events had completed RCA and CSA reports, making it difficult for the review team to make comments on the specific cases.
- Most of the adverse events occurred for women who were admitted after hours and had pre-existing health conditions.
- There was contention over CTG interpretation and timely referral and access to specialist medical care once admitted.

Recommendations relating to the seven adverse events:

- All RCA and CSA reports should be completed as soon as possible and should consider the service context (similar to the London Protocol framework).
- The key themes that emerge out of the full set of RCA and CSA reports need to be shared with clinicians and management to inform future service development activities.

Appendix 1. Terms of Reference

(01 October 2015)

MATERNITY SERVICE REVIEW
REGIONAL WOMEN'S HEALTH SERVICES
Terms of Reference

1. PURPOSE/BACKGROUND

There have been seven reported serious adverse events in the delivery suites of the Regional Women's Health Services (RWHS) over the past nine months, six at Palmerston North Hospital and one at Whanganui Hospital. The events include the death of three neonates, two intrauterine deaths, and harm to two neonates.

In the Palmerston North Hospital events the women were under the primary maternity care of a Lead Maternity Carer (LMC), accessing the Delivery Suite under an access agreement with MDHB or transferred to secondary care. These access agreements are consistent with the national framework for the provision of maternity services, whereby DHBs provide access to their facilities for LMCs. In the Whanganui Hospital event the woman had the clinical responsibility of her care transferred from the LMC to secondary care.

Whanganui DHB has already commissioned a Critical Systems Analysis (CSA) into the adverse event in its unit. Alongside the CSA independent reviews have been undertaken into Obstetric and Midwifery care of the woman and neonate. These three review reports will be shared with the reviewers.

The six events in the Palmerston North maternity unit are the subject of Root Cause Analysis (RCA) investigations, supported by appropriate clinical expertise in midwifery, obstetrics and paediatrics (where appropriate). The families have an allocated "family liaison" person within the service. Communication is being maintained with them, in accordance with their wishes, regarding progress with the reviews and any other support and/or information they require. Engagement with the women and their families for the purpose of this review is incorporated through the family liaison and RCA review processes.

In addition to the understanding that the CSA and RCA processes will bring, we wish to ensure that the Regional Women's Health Service is equipped to fulfil its responsibilities through a thorough understanding of the functioning of maternity services at both hospitals.

The purpose of the review is to identify opportunities for improvement and engender ownership of the short, medium and long term actions needed to ensure a safe and effective service. Given their importance, leadership, clinical governance, interdisciplinary relationships, models of care and the culture of the service will be evaluated by site.

The review group will also review the circumstances of the seven cases relating to the serious adverse events in order to fully inform the service review as a whole.

The review will include structured sessions at both the MidCentral and Whanganui sites to consider the state and functioning of service locally, as well as the regional service as a whole. The outcomes of this service review will feed into the proposed Regional Women's Health Service evaluation.

Together MDHB and WDHB wants to be assured that women can access woman and family centred maternity care at both Palmerston North Hospital and Whanganui Hospital, while meeting all established standards for service delivery.

2. SPONSORS

Chief Executive Officers, MDHB & WDHB

3. REVIEW GROUP

Dr Chris Hendry, Project Manager/Analyst

Dr Ian Page, Obstetrician & Gynaecologist, Northland DHB

Emma Farmer, Head of Division - Midwifery, Waitemata DHB

Dr Bart Baker, Clinical Director and Haematologist, MidCentral DHB

The internal reviewer will support the process overall, facilitate the engagement of key participants and provide advice and support to the external reviewers.

4. RESPONSIBILITIES/FUNCTIONS/EXPECTED OUTCOMES

A robust external clinically led review to establish an understanding of the functioning of the RWHS maternity services. This will include engagement with clinical and support staff, service leadership, lead maternity carers, and staff from other services that have a clinical and operational interface with maternity services. The review will also reference progress with the implementation of the Maternity Quality and Safety Programme

This will consider:

- the current state of clinical governance including clinical leadership, policy, systems and processes by site designed to ensure patient safety and service improvement
- the services' application of documented policies/ procedures/ structures/ established processes in place to support the delivery of maternity services, informed by the circumstances of the 7 cases leading to adverse events including:
    - the national maternity access agreement
    - audit, quality and serious event management processes
    - the application of Serious Assessment Code (SAC) rating for maternity events
    - systems to support early recognition and escalation of serious events
    - quality of documentation/information and access, including the Maternity Clinical Information System

- early evaluation of potential high risk women and referral to appropriate level of care
  - timely access to appropriate back-up and resources including clinical information and staffing.
  - communication within and between the two maternity services, DHB staff, access agreement holders and consumers.

- relationships between hospital staff and relationships with lead maternity carers, and the effectiveness of that interface, given the shared practice environment.
- the culture of the service overall by site
- an assessment of the capacity and capability within the service to undertake the necessary service development to address any findings of this review

The reviewers will determine appropriate recommendations based on the outcome of their review, covering service wide recommendations for service improvement and corrective actions where appropriate. This should also include recommendations regarding the configuration and leadership of the RWHS where this is considered necessary.

5. PARTICIPANTS/INTERVIEWEES

- Chief Executive Officer MDHB and WDHB
- Regional Clinical Director of Women's Health
- Medical Heads of Women's Health MDHB and WDHB
- Regional Director of Midwifery
- Midwifery Advisor, MDHB/WDHB
- Senior Medical Staff
- Resident Medical Officers
- Charge Midwife/Associate Charge Midwifes
- Lead Maternity Carers
- Consumers involved in Maternity Quality & Safety Programme
- Service Manager, RWHS
- Relevant Clinical Staff
- Any other staff identified during the review
- Clinical staff of rural units as appropriate
- Manager Quality MDHB and WDHB
- Chief Medical Officers MDHB and WDHB
- Directors of Nursing, MDHB & WDHB
- Operations Director, Specialist Community & Regional Services
- Director, Patient Safety & Clinical Effectiveness

6. STAKEHOLDERS

- Association of Salaried Medical Specialists
- Midwifery Employee Representation & Advisory Service
- New Zealand Nurses Organisation
- New Zealand Resident Doctors Association
- Public Service Association
- Royal Australian and New Zealand College of Obstetricians and Gynaecologists
- New Zealand College of Midwives

7. COMMUNICATIONS

A plan has been developed to support communications in relation to the serious adverse events and addressing internal and external stakeholders. This will be updated during the review process as appropriate

8. REPORTING

A draft report is to be provided to the General Manager, Clinical Services & Transformation, MDHB as the responsible senior manager for the Regional Women's Health Services for feedback, within four weeks of review completion, and made available for review by both the MCH and WDHB Serious Adverse Events Group.

The final report to be completed within a further three weeks.

9. AUTHORISED BY:

Kathryn Cook **Chief Executive**	**Mike Grant** **General Manager** **Clinical Services**	**Nicholas Glubb** **Operations Director** **Regional Services**

Appendix 2. Documents requested for the review

MDHB AND WDHB DOCUMENTS REQUIRED FOR SERVICE REVIEW

Chris Hendry 12 August 2015
Chris.hendry@nzichc.org.nz

Document type/source of information.	Document	Available/ source
Organisational diagram(s)	MDHB & WDHB RWHS in the context of the 2 DHB's women's health services Quality and safety for both DHBs and RWHS	
Service localities	Description of RWHS maternity facilities and WH beds & community clinics. LMC numbers and localities	
Communication with interface providers	Copies of newsletters/communication with access agreement holders over the past 12 months.	
Terms of reference and minutes from last meeting. (All groups are mentioned in the RWHS Service plan)	Joint consultation committee Regional Cultural Advisory Service. RWHS Service Governance Group (last 12 month minutes) RWHS nursing governance group RWHS midwifery governance group Multidisciplinary Cancer Treatment Service Any other groups associated with the RWHS RWHS quality and safety group	
RWHS plans (All groups are mentioned in the RWHS Service plan)	RWHS Annual plan/operational plan that includes priorities and service levels RWHS Credentialing RWHS Performance reviews RWHS PDRP programme RWHS Nursing and midwifery workforce development and training plans RWHS medical workforce development plans	
Service specifications Regional policies and guidelines	Regional Urogynaecology service Regional foetal-maternal medicine service Fertility clinic Common point of referral and discharge Transfer of care Common surgical waiting lists and scheduling Social workers common approach Enrolment of newborns with GP Women and families information on services available and support including accommodation and transport. List of WHS that sit outside the RWHS for both DHBs and evidence of how these services interface/interact/refer to or are transferred to RWHS. For example the MDHB Diabetes services for maternity services are not part of the RWHS I assume.	
Maternity clinical Information Systems	(*This will be in relation to the use of both paper and electronic systems simultaneously which could result in some clinicians not having the full picture).* Any information on access and utilisation (e.g. Diabetes team have just obtained logins to the maternity system). Which services and clinicians use electronic notes? Actual referral processes (e and paper) including referral forms. Access to e-referral e-records at outreach units. Copy of template for letter to LMC providing information following referral or transfer of care.	
Service volumes for past 24 months	Outreach clinics (Levin, Dannevirke, Marton, Taihape, Waimarino). Early pregnancy units. Antenatal assessment unit activities (Palmerston Nth and Whanganui). Maternity activity volumes for both DHBs. Gynaecology activities volumes for both DHBs	

	Including: • Regional Urogynaecology service • Regional foetal-maternal medicine service • Fertility clinic	
Reports, audits KPIs	Latest gynaecology audit report/data. Latest colposcopy audit report/data. MQSP reports Stocktake of clinical governance activities Last BFHI accreditation report BFCI strategy/plan Fertility clinic stocktake Ultrasound stocktake Staffing FTE for each and the RWHS roles Reports from service benchmarking (? Part of Aust/NZ women's health benchmarking groups)	
Position descriptions and name of the incumbent	RWHS Service manager RWHS Change manager RWHS Midwifery Director RWHS Clinical Director RWHS Director of Allied Health RWHS Lead colposcopist	
RWHS Workforce	Copy of orientation programme & related documentation for: • LMCs • New Midwifery and Nursing Staff • SMOs • SHOs • HOs Rosters for both DHBs over past 12 months including: All medical staff including House officers. SMO responsibilities and FTE status	
Provide access to when on site	Register of staff training and professional development: Evidence of compliance with ITP guidelines	

Further information requested for the RWHS Maternity Services Review

From Chris Hendry **02 November 2015**

NCIS Implementation

1. Letter from Cheryl Benn outlining 10 concerns about the system
2. Copy of instructions on use of MCIS for new staff (including Registrars and House Officers).
3. Project plan for the roll out of the MCIS and related meeting minutes.

Leadership and governance

1. Copy of the Leadership Group report
2. Copy of the most recent RWHS quarterly Report
3. Copy of most recent reports on maternity to CPHAC
4. Latest minutes for the RWHS Leadership Group

Staff recruitment and retention

1. FTE status of each Obstetric consultant and when they commenced with the service.
2. FTE status and length of service of any Obstetrician who resigned from the service in the past 24 months
3. Copy of the orientation manual for medical staff (Consultants, Registrars & house officers)
4. Copy of the business case prepared by Robyn Williamson for additional Obstetric consultants (mentioned in the RWHS leadership team minutes).

Medical staff professional development & associated activities

1. Date of expiry of all Obstetric consultants credentialing.
2. Date all Obstetric consultants attended the RANZCOG CTG workshop
3. Experience of each of the Registrar Pre or Post MRNZCOG
    a. Orientation programme for maternity including CTG training/workshops
    b. Date each commenced in the service
4. Experience of each of the House Officers (years post registration)
    a. Orientation programme for maternity including CTG training/workshops
    b. Months (date) that they commence on the run each year
5. Report on the Evaluation of medical professional development programme (Digby was working on)

Clinical quality and safety

1. Copy of each of the final versions of the 7 RCA Reports
2. Schedule of clinical Audits(including dates)
3. Minutes from the 3 most recent meetings of the Maternity Service Improvement Group
4. Minutes from the 3 most recent meetings of the RWHS Midwifery Professional Support Group
5. Minutes from the 3 most recent meetings of the RWHS Document Management Committee
6. TOR and for the Maternity Outcome Tracking Meeting and minutes from the 3 most recent meeting.
7. TOR for the RWHS Audit and Case Review Committee
8. TOR of the MDHB and WDHB Serious and Adverse Events Group

Appendix 3. Case Profile template.

A CASE PROFILE

1. **Title.** Key elements of the case should be mentioned in the title and might include the presenting symptoms, the diagnosis, intervention, or outcome (De-identified client).
2. **Introduction.** Briefly summarize the background and context of this case profile (including brief description of the event).
3. **Clinician involvement**. Who was clinically responsible for the woman and baby at what points in the process and who else was involved.
4. **Presenting Concerns.** Summarize the patient's presenting concerns along with key historical data and demographic information that relates to the event.
5. **Clinical Findings.** Summarize any of the following relevant to the event (1) Medical, family, and psychosocial history (including lifestyle and genetic information); (2) Pertinent co-morbidities and interventions; and (3) Physical examination focused on the important findings including diagnostic testing.
6. **Timeline.** Create a timeline that includes specific dates and times in a table, figure, or graphic.
7. **Diagnostic Focus and Assessment relating to the event.** Summarize the (1) Diagnostic results (testing, imaging, questionnaires, referrals); (2) Diagnostic challenges; (3) Diagnostic reasoning and (4) Relevant prognostic characteristics.
8. **Therapeutic Focus and Assessment.** Summarize recommendations and interventions (pharmacologic, surgical, lifestyle) and how they were administered (dosage, strength, etc.) that relate to the event.
9. **Follow-up and Outcomes.** Summarize the clinical course of this case including the event and outcome.
10. **Discussion.** Summarize the strengths and limitations associated with this case report.
11. **Patient Perspective.** When appropriate, the patient should share their experience of their care in a brief narrative published with (or accompanying) this case report.

STAKEHOLDERS (list)

- **Client and Family**.
- **Clinicians:** Names and roles
- **Others:**

Attached evidence:

All available case notes

Appendix 4. Review on-site meetings

Review of the RWHS Maternity Services Meeting and Visit Agenda
Monday 9th November 2015
MidCentral DHB

	Emma Farmer	Chris Hendry	Ian Page
08:00-08:30	Meeting with CEO Kath Cook, Mike Grant, Nicholas Glubb and Dr Bart Baker		
08:30-09:00	CMO – Mr Ken Clark		
09:00-09:30	Tour of the maternity facilities		
09:30-10:00	09:30 – 10:00 Morning tea		
	Emma Farmer	**Chris Hendry**	**Ian Page**
10:00-11.30	10:00-10:45 Senior Midwives & Midwifery Managers – Diane Hirst, Robyn Williamson, Carole Collins 10:45-11:30 Rural – J Stojanovic, Dannevirke Rep – Linda Shannon, Tungane Kani)		O&G Consultants – N Shehata, S Grant, S Machin, T Hamouda,
11:30-12:00	MDHB Maternity Management – S Grant, D Ngan Kee, R Williamson, L Dann, D Hirst, N Glubb, J Stojanovic		O&G Registrars & House Officers -
12:00-12:30	Meet with interface services: Anaesthetics Reps – David Sapsford, Rob Whitta, Catherine Eckersley, Alison Davies		Paediatrician – Consultants
12:30-13:00	12:30-13:00 Lunch Break		
13:00-13:30	RWHS Clinical Director – Dr Digby Ngan Kee		
13:30-14:00	RWHS Midwifery Advisor – Dr Cheryl Benn		
14:00-14:30	RWHS Director of Midwifery – Dr Leona Dann		
14:30:15:15	WHU Core Midwives		
15:15-15:45	15:15 – 15:45 Afternoon tea		
15:45-16:15	Quality and safety team (including maternity quality & safety person) Susan Murphy & Amanda Rouse, Barb Ruby, Muriel Hancock		
16:15-17:00	Team summing up and requests for further interviews/information		
19:00-20:30	Meeting with LMC midwives – Cheryl Benn – Midwifery Care Lounge, Cnrs Grey & Martin Streets, Palmerston North		

Tuesday 10th November 2015
Wanganui DHB

	Emma Farmer	Chris Hendry	Ian Page	WDHB key people
09:00-10:00	Meeting with CEO, Senior Management WDHB			Julie, Rowena, Tracey, Frank
10:00-10.30	Tour of the maternity facilities			Lucy
10:30-10:45	10.30 – 10.45 Morning tea			
10.45-11:30	WDHB Clinical Director SMOs			Mark Fela, Keven, David
11:30-12.00	Maternity Management			Lucy, Declan, Peter
12:00-12:45	Core midwives			All staff invite
	12:45-13:30 Lunch Break			
12:45-13:30	**Emma Farmer**	**Chris Hendry**	**Ian Page**	
13:30-14:15	LMCs			
14:15-14.45	14.15 – 14:45 Afternoon tea			
14.45-15:30	Maternity Service interface providers: emergency, paediatrics & anaesthetics			Chris / Carla Janene / David Marco / Di
15:30-16:00	Team summing up and requests for further interviews/information			Mark, Lucy, Declan

Wednesday 11th November 2015
Midcentral DHB

	Emma Farmer	Chris Hendry	Ian Page
08:00-08:30	Meet with interface services: Emergency Dept Reps - Iona Bichan, David Prisk, Sarah Donnelly		
08:30-09:00	Meet with interface services: Diabetes team Reps – Amanda Driffill, Helen Snell, Veronica Crawford, Owais Chaudhri		
09:00-09:30	Director of Nursing Michele Coghlan & Nurses		
09:30-10:00	NNU Nursing – Paula Spargo **(Have checked with Chris re written submission as Paula away)**		
10:00-10:30	Maternal Mental Health – Karen Whitrod		
10:30–11:00	10:30 – 11:00 Morning tea		
11:00-11:30	**SPARE TIME**		
11:30-12:00	Antenatal education & maternity Resource Centres – Jenny Warren, Alisi Vudiniabola, Kelly Wylie		
12:00-12:30	**SPARE TIME**		
12:30-13:00	12:30-13:00 Lunch Break		
13:00-14:00	Summary of findings and prepare for feedback to MDHB and WDHB		
14:00–15:00	Feedback to MDHB and WDHB with draft recommendations with CEO		